

Nuclear winter 'clear possibility,' panel of scientists tells government

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WASHINGTON — A panel of scientists told the federal government yesterday that, despite great uncertainties, there was a "clear possibility" that a major nuclear war would generate enough smoke and dust to blot out the sun in the Northern Hemisphere, causing severe drops in temperature.

The report, the first major assessment for the federal government of the theory of "nuclear winter," was prepared by a committee of the National Research Council. The 193-page report cautioned that detailed predictions of climatic cooling were unreliable because of "enormous uncertainties" in the data and that scientists now could give only "a general indication of the seriousness of what might occur."

Nonetheless, Dr. George F. Carrier, an applied scientist at Harvard University who was chairman of the 18-member committee, said at a news con-

ference that the panel's findings were "quite consistent" with studies that originally outlined the theory of nuclear winter. The authors of the early studies had predicted that the combined effects of low temperatures, radiation, disease and starvation might all but extinguish life on the Earth.

The committee recommended that a major research effort by the federal government be given high priority to narrow the uncertainties.

Reaction to the report was that it enhanced the topic's overall credibility. When the nuclear winter theory was first publicized last year by a small group of scientists, it was dismissed by some critics as alarmist conjecture.

"They've added legitimacy to the issue by agreeing it's a serious problem," said Dr. Richard P. Turco, a physicist at R&D Associates in Marina Del Rey, Calif., who is a co-author of one of the theory's original formulations.

Although the committee did not investigate the social, biological or political implications of the theory, it commented that the climatic effects of nuclear war might threaten populations far removed from target areas and pose major risks to any nation that initiated the use of nuclear weapons.

And although the panel did not endorse any numerical estimates, it said drops in temperature of 18 to 45 degrees might last for months in the North Temperate Zone, with near total loss of light over much of the Northern Hemisphere.

"Significant amounts of dust and smoke could drift to and across the Equator as early as a few weeks after a nuclear exchange," it added, but noted that climatic effects in the Southern Hemisphere would be less severe. In its calculations, the committee assumed the detonation of about half of the world's total nuclear arsenal.